

# Corporate Taxation

## History, Measurement, and Theory

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September 14, 2020

# Outline of Talk

1 History

2 Aspects of Taxation

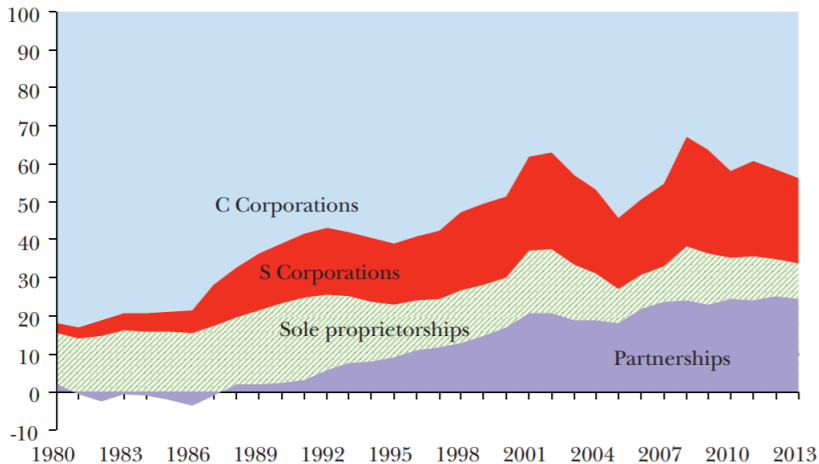
3 Measurement

4 Theory

# Types of Firms

- Sole Proprietorship (24 million)
- Partnership (8 million)
- S-corporation (5 million)
- C-Corporation (1.7 million)

# Share of Total Business Net Income by Firm Type



Source: Auerbach 2018

Figure: Share of income by firm type

# Why tax corporations?

- Two frames for thinking about taxation
  - Coercive
    - Ability to pay
    - Regulatory/administrative
    - Control Power
  - Efficiency-oriented: Wicksell → Lindahl → Buchanan
- Why not tax the final distribution?
  - Legal concept: separate legal entity vs agent of shareholders
- Cultural & institutional motives

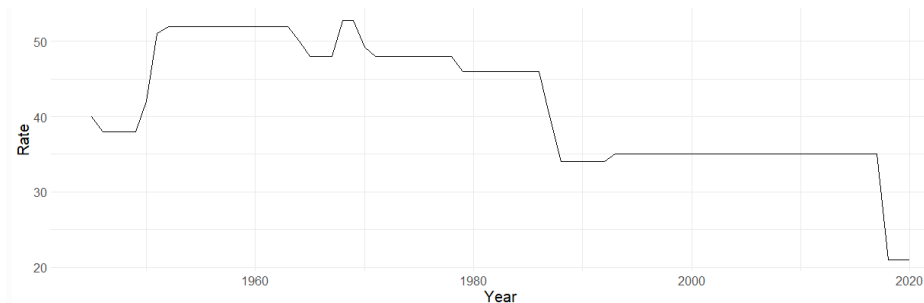
# Early Beginnings of the US Corporation

- Joint-stock corporation
- America: Founded by corporations
- 19th century turn from public to private

# Brief History of US Corporate Taxation

- Abortive early attempts to tax corporations
  - Civil War Income Tax
  - 1894 Income Tax
  - Punitive measures on Standard Oil & American Sugar Refining Company
- Corporate Income Tax Act of 1909
  - Key issue: Fiscal federalism

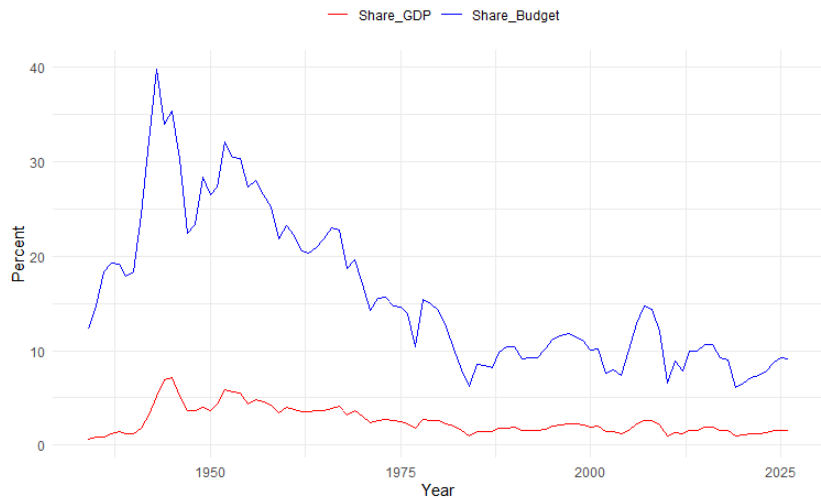
# Statutory Corporate Tax Rate in the Postwar Era



Source: Tax Policy Center



# Changes in Business Tax Share



**Figure:** Share of Corporate Tax as Share of Budget and GDP

# Two Key Examples of Major Tax Reform

- Tax Reform Act of 1986
  - Hailed by Alan Blinder *and* Martin Feldstein
  - Revenue neutral; reduced rates while expanding base
  - Interaction between personal and corporate rates apparent
- 2017 Tax Cuts and Jobs Act
  - Welcomed by Feldstein, hated by Blinder
  - Rate reduction & base broadening, but revenue-reducing
  - Shift to territorial system

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# What makes up a tax?

- Tax on net income
  - Alternative: Destination-based net cash flow tax (Auerbach and Devereaux)
- Inflation
- Progressivity

# What makes up a tax? Deductions and credits

- Deductions reduce taxable income, while credits reduce amount of taxes owed
- Investment tax credit
- Solar energy credit
- Employee salaries, health benefits, and tuition reimbursement are deductible
- Depreciation allowance
  - 100% bonus depreciation
- Interest deduction introduces debt/equity distortion

# What makes up a tax? Timing

- Timing
  - “Tax loss”
  - Carryforwards
  - Carrybacks

## $\tau$ : A Good Theoretical Model?

- Tax rate is not fixed and is subject to (gentle) manipulation by the firm
- Not all firms pay the same rate
- Firms pay different rates in different growth stages

- Tax strategies
  - Double Irish with a Dutch Sandwich
- Tax objectives
- Worldwide vs territorial taxation



# International Taxation (cont.)

- Participation Exemption
- FDII (Foreign Derived Intangible Income)
- GILTI (Global Intangible Low Tax Income)
- BEAT (Base Erosion and Anti-Abuse Tax)
- Section 965

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# Two Key Issues

- Tax Rates
  - Measurement problems: Different rates, timing, aggregation, incidence, compliance
- Elasticities
  - Dependent on tax rate used
  - Which investment?

# Key Concepts

- Statutory Rates
- Marginal Rates
  - Which marginal rate? Different investments have different marginal tax rates depending on tax structure
- Average Rates & Effective Rates
  - Level of aggregation
  - Which effective rate? GAAP vs Cash
- Marginal Effective Tax Rate

# Which data?

- Aggregate (Overall and Sectoral)
  - ① SOI
  - ② NIPA
  - ③ CBO
  - ④ Narrative accounts
  - ⑤ Issue: Data are accurate and easy to collect, but what if it misses idiosyncrasy?
- Firm-Level
  - ① 10-K
  - ② Compustat
  - ③ SIPP
  - ④ Issue: Data difficult to collect, not representative, sometimes inaccurate

# Data Issue: Compliance

- How accurate is firm reporting?
- What is the “elasticity” of compliance with respect to changes in taxation/regulation?
- How do we assess heterogeneity in underground activity?

# Extracting Elasticities: Four Methods

- VAR/SVAR (Mertens and Ravn, 2013)
- Narrative (Romer and Romer, 2010)
- Firm-level Shocks (JSRP Future Research)
- Theory (e.g., McGrattan, 1994; Barro and Furman, 2018)

Do the data make sense?

# C-Corp Explorer

An R Shiny Web App



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# Example models of investment

- Hall and Jorgenson, 1967. "Tax Policy and Investment Behavior."
  - Benchmark neoclassical model for investment
  - Basic idea: after-tax return on investment must be equal to after-tax cost in equilibrium
- McGrattan, 1994. "A Progress Report on Business Cycle Models." Federal Reserve Bank of Minneapolis Quarterly Review 18 (4), pp. 2-17
  - RBC model with fiscal shocks, tax shocks (corporate and personal), and productivity shocks
  - Simple but powerful

# User Cost of Capital

- Concept: A profit-maximizing firm's after-tax return to capital must be equal to its after-tax cost
- Robust to changes in depreciation, labor cost associated with capital production, etc.
- Illustrative of differences in tax treatment between equipment, structures, and R&D
- Point of failure:  $\tau$  is not exactly exogenous

# User Cost of Capital (cont.)

- Multistage problem:
  - ① Choose legal form
  - ② Choose location
  - ③ Choose investment mix
  - ④ Choose (in some sense)  $\tau$ ; path dependence is key here
- See also Barro and Furman, 2018 (“The macroeconomic effects of the 2017 tax reform”)

# Example: Using RBC to Predict TCJA

- McGrattan 1994
- Simple RBC model → *go to paper*
- Calibration: How do we estimate/choose parameters?

# Extensions: Tax Incidence

- Key question for normative concerns and investment
- Starting point: Harberger 1962 (“The Incidence of the Corporation Income Tax”)
  - Excise tax effect
  - Factor substitution effect
  - Under reasonable assumptions, entire incidence falls on capital
- Extension: Production Efficiency Theorem

# Extensions: Open Economy

- Neglected question: Open economy
  - Increasingly relevant for analysis, particularly for TCJA
  - FDII, BEAT, GILTI

Questions?

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